

RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 10/563,916
Source: 1 Fw0
Date Processed by STIC: 7/6/06

ENTERED



IFWO

RAW SEQUENCE LISTING

DATE: 07/06/2006

PATENT APPLICATION: US/10/563,916

TIME: 18:18:05

Input Set : A:\2006-06-29 0020-5461PUS1.TXT

Output Set: N:\CRF4\07062006\J563916.raw

3 <110> APPLICANT: SATO, Noriyuki
 4 TORIGOE, Toshihiko
 5 HARIU, Hiroyuki
 6 HIROHASHI, Yoshihiko
 8 <120> TITLE OF INVENTION: HLA-A24 BINDING CANCER ANTIGEN PEPTIDE DERIVED
 FROM LIVIN
 10 <130> FILE REFERENCE: 0020-5461PUS1
 12 <140> CURRENT APPLICATION NUMBER: US 10/563,916
 13 <141> CURRENT FILING DATE: 2006-01-10
 15 <150> PRIOR APPLICATION NUMBER: PCT/JP04/10008
 16 <151> PRIOR FILING DATE: 2004-07-07
 18 <150> PRIOR APPLICATION NUMBER: JP2003-273236
 19 <151> PRIOR FILING DATE: 2003-07-11
 21 <160> NUMBER OF SEQ ID NOS: 63
 23 <170> SOFTWARE: PatentIn version 3.2
 25 <210> SEQ ID NO: 1
 26 <211> LENGTH: 280
 27 <212> TYPE: PRT
 28 <213> ORGANISM: Homo sapiens
 30 <400> SEQUENCE: 1
 32 Met Gly Pro Lys Asp Ser Ala Lys Cys Leu His Arg Gly Pro Gln Pro
 33 1 5 10 15
 36 Ser His Trp Ala Gly Asp Gly Pro Thr Gln Glu Arg Cys Gly Pro
 37 20 25 30
 40 Arg Ser Leu Gly Ser Pro Val Leu Gly Leu Asp Thr Cys Arg Ala Trp
 41 35 40 45
 44 Asp His Val Asp Gly Gln Ile Leu Gly Gln Leu Arg Pro Leu Thr Glu
 45 50 55 60
 48 Glu Glu Glu Glu Glu Gly Ala Gly Ala Thr Leu Ser Arg Gly Pro Ala
 49 65 70 75 80
 52 Phe Pro Gly Met Gly Ser Glu Glu Leu Arg Leu Ala Ser Phe Tyr Asp
 53 85 90 95
 56 Trp Pro Leu Thr Ala Glu Val Pro Pro Glu Leu Leu Ala Ala Ala Gly
 57 100 105 110
 60 Phe Phe His Thr Gly His Gln Asp Lys Val Arg Cys Phe Phe Cys Tyr
 61 115 120 125
 64 Gly Gly Leu Gln Ser Trp Lys Arg Gly Asp Asp Pro Trp Thr Glu His
 65 130 135 140
 68 Ala Lys Trp Phe Pro Ser Cys Gln Phe Leu Leu Arg Ser Lys Gly Arg
 69 145 150 155 160
 72 Asp Phe Val His Ser Val Gln Glu Thr His Ser Gln Leu Leu Gly Ser
 73 165 170 175
 76 Trp Asp Pro Trp Glu Glu Pro Glu Asp Ala Ala Pro Val Ala Pro Ser
 77 180 185 190

P.9

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/563,916

DATE: 07/06/2006

TIME: 18:18:05

Input Set : A:\2006-06-29 0020-5461PUS1.TXT

Output Set: N:\CRF4\07062006\J563916.raw

```

80 Val Pro Ala Ser Gly Tyr Pro Glu Leu Pro Thr Pro Arg Arg Glu Val
81      195      200      205
84 Gln Ser Glu Ser Ala Gln Glu Pro Gly Ala Arg Asp Val Glu Ala Gln
85      210      215      220
88 Leu Arg Arg Leu Gln Glu Glu Arg Thr Cys Lys Val Cys Leu Asp Arg
89 225      230      235      240
92 Ala Val Ser Ile Val Phe Val Pro Cys Gly His Leu Val Cys Ala Glu
93      245      250      255
96 Cys Ala Pro Gly Leu Gln Leu Cys Pro Ile Cys Arg Ala Pro Val Arg
97      260      265      270

```

100 Ser Arg Val Arg Thr Phe Leu Ser

101 275 280

104 <210> SEQ ID NO: 2

105 <211> LENGTH: 9

106 <212> TYPE: PRT

107 <213> ORGANISM: Artificial Sequence

109 <220> FEATURE:

110 <223> OTHER INFORMATION: HLA-A24 binding cancer antigen peptide derived
from livin

112 <400> SEQUENCE: 2

114 Ala Trp Asp His Val Asp Gly Gln Ile

115 1 5

118 <210> SEQ ID NO: 3

119 <211> LENGTH: 10

120 <212> TYPE: PRT

121 <213> ORGANISM: Artificial Sequence

123 <220> FEATURE:

124 <223> OTHER INFORMATION: HLA-A24 binding cancer antigen peptide derived
from livin

126 <400> SEQUENCE: 3

128 Ala Trp Asp His Val Asp Gly Gln Ile Leu

129 1 5 10

132 <210> SEQ ID NO: 4

133 <211> LENGTH: 10

134 <212> TYPE: PRT

135 <213> ORGANISM: Artificial Sequence

137 <220> FEATURE:

138 <223> OTHER INFORMATION: HLA-A24 binding cancer antigen peptide derived
from livin

140 <400> SEQUENCE: 4

142 Ala Phe Pro Gly Met Gly Ser Glu Glu Leu

143 1 5 10

146 <210> SEQ ID NO: 5

147 <211> LENGTH: 9

148 <212> TYPE: PRT

149 <213> ORGANISM: Artificial Sequence

151 <220> FEATURE:

152 <223> OTHER INFORMATION: HLA-A24 binding cancer antigen peptide derived
from livin

154 <400> SEQUENCE: 5

156 Gly Met Gly Ser Glu Glu Leu Arg Leu

157 1 5

160 <210> SEQ ID NO: 6

RAW SEQUENCE LISTING

DATE: 07/06/2006

PATENT APPLICATION: US/10/563,916

TIME: 18:18:05

Input Set : A:\2006-06-29 0020-5461PUS1.TXT

Output Set: N:\CRF4\07062006\J563916.raw

```

161 <211> LENGTH: 9
162 <212> TYPE: PRT
163 <213> ORGANISM: Artificial Sequence
165 <220> FEATURE:
166 <223> OTHER INFORMATION: HLA-A24 binding cancer antigen peptide derived
from livin
168 <400> SEQUENCE: 6
170 Pro Trp Thr Glu His Ala Lys Trp Phe
171 1 5
174 <210> SEQ ID NO: 7
175 <211> LENGTH: 9
176 <212> TYPE: PRT
177 <213> ORGANISM: Artificial Sequence
179 <220> FEATURE:
180 <223> OTHER INFORMATION: HLA-A24 binding cancer antigen peptide derived
from livin
182 <400> SEQUENCE: 7
184 Lys Trp Phe Pro Ser Cys Gln Phe Leu
185 1 5
188 <210> SEQ ID NO: 8
189 <211> LENGTH: 10
190 <212> TYPE: PRT
191 <213> ORGANISM: Artificial Sequence
193 <220> FEATURE:
194 <223> OTHER INFORMATION: HLA-A24 binding cancer antigen peptide derived
from livin
196 <400> SEQUENCE: 8
198 Lys Trp Phe Pro Ser Cys Gln Phe Leu Leu
199 1 5 10
202 <210> SEQ ID NO: 9
203 <211> LENGTH: 10
204 <212> TYPE: PRT
205 <213> ORGANISM: Artificial Sequence
207 <220> FEATURE:
208 <223> OTHER INFORMATION: HLA-A24 binding cancer antigen peptide derived
from livin
210 <400> SEQUENCE: 9
212 Ala Lys Trp Phe Pro Ser Cys Gln Phe Leu
213 1 5 10
216 <210> SEQ ID NO: 10
217 <211> LENGTH: 9
218 <212> TYPE: PRT
219 <213> ORGANISM: Artificial Sequence
221 <220> FEATURE:
222 <223> OTHER INFORMATION: HLA-A24 binding cancer antigen peptide derived
from livin
224 <400> SEQUENCE: 10
226 Trp Phe Pro Ser Cys Gln Phe Leu Leu
227 1 5
230 <210> SEQ ID NO: 11
231 <211> LENGTH: 9
232 <212> TYPE: PRT
233 <213> ORGANISM: Artificial Sequence

```

235 <220> FEATURE:

RAW SEQUENCE LISTING

DATE: 07/06/2006

PATENT APPLICATION: US/10/563,916

TIME: 18:18:05

Input Set : A:\2006-06-29 0020-5461PUS1.TXT

Output Set: N:\CRF4\07062006\J563916.raw

236 <223> OTHER INFORMATION: HLA-A24 binding cancer antigen peptide derived
 from livin
 238 <400> SEQUENCE: 11
 240 Arg Cys Phe Phe Cys Tyr Gly Gly Leu
 241 1 5
 244 <210> SEQ ID NO: 12
 245 <211> LENGTH: 9
 246 <212> TYPE: PRT
 247 <213> ORGANISM: Artificial Sequence
 249 <220> FEATURE:
 250 <223> OTHER INFORMATION: HLA-A24 binding cancer antigen peptide derived
 from livin
 252 <400> SEQUENCE: 12
 254 Leu Thr Ala Glu Val Pro Pro Glu Leu
 255 1 5
 258 <210> SEQ ID NO: 13
 259 <211> LENGTH: 9
 260 <212> TYPE: PRT
 261 <213> ORGANISM: Artificial Sequence
 263 <220> FEATURE:
 264 <223> OTHER INFORMATION: HLA-A24 binding cancer antigen peptide derived
 from livin
 266 <400> SEQUENCE: 13
 268 Val Gln Glu Thr His Ser Gln Leu Leu
 269 1 5
 272 <210> SEQ ID NO: 14
 273 <211> LENGTH: 9
 274 <212> TYPE: PRT
 275 <213> ORGANISM: Artificial Sequence
 277 <220> FEATURE:
 278 <223> OTHER INFORMATION: HLA-A24 binding cancer antigen peptide derived
 from livin
 280 <400> SEQUENCE: 14
 282 Ser Val Gln Glu Thr His Ser Gln Leu
 283 1 5
 286 <210> SEQ ID NO: 15
 287 <211> LENGTH: 9
 288 <212> TYPE: PRT
 289 <213> ORGANISM: Artificial Sequence
 291 <220> FEATURE:
 292 <223> OTHER INFORMATION: HLA-A24 binding cancer antigen peptide derived
 from livin
 294 <400> SEQUENCE: 15
 296 Gly Ala Arg Asp Val Glu Ala Gln Leu
 297 1 5
 300 <210> SEQ ID NO: 16
 301 <211> LENGTH: 9
 302 <212> TYPE: PRT
 303 <213> ORGANISM: Artificial Sequence
 305 <220> FEATURE:
 306 <223> OTHER INFORMATION: HLA-A24 binding cancer antigen peptide derived
 from livin
 308 <400> SEQUENCE: 16

310 Thr Ala Glu Val Pro Pro Glu Leu Leu
311 1 5

RAW SEQUENCE LISTING

DATE: 07/06/2006

PATENT APPLICATION: US/10/563,916

TIME: 18:18:05

Input Set : A:\2006-06-29 0020-5461PUS1.TXT

Output Set: N:\CRF4\07062006\J563916.raw

```

314 <210> SEQ ID NO: 17
315 <211> LENGTH: 9
316 <212> TYPE: PRT
317 <213> ORGANISM: Artificial Sequence
319 <220> FEATURE:
320 <223> OTHER INFORMATION: HLA-A24 binding cancer antigen peptide derived
from livin
322 <400> SEQUENCE: 17
324 Gln Ile Leu Gly Gln Leu Arg Pro Leu
325 1 5
328 <210> SEQ ID NO: 18
329 <211> LENGTH: 9
330 <212> TYPE: PRT
331 <213> ORGANISM: Artificial Sequence
333 <220> FEATURE:
334 <223> OTHER INFORMATION: HLA-A24 binding cancer antigen peptide derived
from livin
336 <400> SEQUENCE: 18
338 Asp Val Glu Ala Gln Leu Arg Arg Leu
339 1 5
342 <210> SEQ ID NO: 19
343 <211> LENGTH: 9
344 <212> TYPE: PRT
345 <213> ORGANISM: Artificial Sequence
347 <220> FEATURE:
348 <223> OTHER INFORMATION: HLA-A24 binding cancer antigen peptide derived
from livin
350 <400> SEQUENCE: 19
352 Gly Pro Lys Asp Ser Ala Lys Cys Leu
353 1 5
356 <210> SEQ ID NO: 20
357 <211> LENGTH: 9
358 <212> TYPE: PRT
359 <213> ORGANISM: Artificial Sequence
361 <220> FEATURE:
362 <223> OTHER INFORMATION: HLA-A24 binding cancer antigen peptide derived
from livin
364 <400> SEQUENCE: 20
366 Val Cys Ala Glu Cys Ala Pro Gly Leu
367 1 5
370 <210> SEQ ID NO: 21
371 <211> LENGTH: 9
372 <212> TYPE: PRT
373 <213> ORGANISM: Artificial Sequence
375 <220> FEATURE:
376 <223> OTHER INFORMATION: HLA-A24 binding cancer antigen peptide derived
from livin
378 <400> SEQUENCE: 21
380 Val Pro Ala Ser Gly Tyr Pro Glu Leu
381 1 5
384 <210> SEQ ID NO: 22
385 <211> LENGTH: 9
386 <212> TYPE: PRT

```


387 <213> ORGANISM: Artificial Sequence

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/10/563,916

DATE: 07/06/2006
TIME: 18:18:06

Input Set : A:\2006-06-29 0020-5461PUS1.TXT
Output Set: N:\CRF4\07062006\J563916.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:63; Xaa Pos. 2,10

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/563,916

DATE: 07/06/2006

TIME: 18:18:06

Input Set : A:\2006-06-29 0020-5461PUS1.TXT

Output Set: N:\CRF4\07062006\J563916.raw

L:983 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:63 after pos.:0